

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 03/05642

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 659 626 A (ORT JAMES R ET AL) 19 August 1997 (1997-08-19) column 18, line 48, section "Apply Gabor and Minutia Filters", continued until column 20, line 35	1,2
Y	the whole document	3,4
Y	HONG L ET AL: "FINGERPRINT IMAGE ENHANCEMENT: ALGORITHM AND PERFORMANCE EVALUATION" 1 August 1998 (1998-08-01), IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE, IEEE INC. NEW YORK, US, VOL. 20, NR. 8, PAGE(S) 777-789 , XP000774452 ISSN: 0162-8828 Section 2.7. "Filtering", page 783-784	3,4

-/--

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

3 May 2004

Date of mailing of the international search report

10/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Grigorescu, C

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 03/05642

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/146178 A1 (UDUPA RAGHAVENDRA U ET AL) 10 October 2002 (2002-10-10) the whole document -----	1-9
X,P	YANG J ET AL: "A modified Gabor filter design method for fingerprint image enhancement" August 2003 (2003-08), PATTERN RECOGNITION LETTERS, NORTH-HOLLAND PUBL. AMSTERDAM, NL, VOL. 24, NR. 12, PAGE(S) 1805-1817 , XP004422277 ISSN: 0167-8655 the whole document -----	1-4

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International Application No  
**PCT/IB 03/05642**

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5659626	A	19-08-1997	US 5926555 A	20-07-1999
			US 5799098 A	25-08-1998
<hr/>				
US 2002146178	A1	10-10-2002	NONE	
<hr/>				